PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Rail Safety and Carriers Division
Rail Engineering Safety Branch
Rail Transit Safety Section

RESOLUTION ST-53
November 29, 2001

R E S O L U T I O N

RESOLUTION GRANTING THE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (SCVTA) AN EXEMPTION FROM GENERAL ORDER 143-B, SECTION 4.12 DEADMAN CONTROL.

Summary

This resolution grants the Santa Clara Valley Transportation Authority's (SCVTA) request for authority to deviate from the deadman control requirements of General Order 143-B, Section 4.12. These requirements ensure the train stops if the train operator becomes incapacitated (deadman control device). This deviation will permit a deadman control mechanism similar to that currently employed by SCVTA's existing fleet of light rail vehicles (LRVs). The deviation allows the use of a retrievable option on the deadman control mechanism of the new low floor LRVs SCVTA is purchasing. The retrievable option will not compromise the safety function of the deadman controller.

Background

By letter dated June 26, 2001, SCVTA requested authority to deviate from the requirements of General Order 143-B, Section 4.12 Deadman Control, which states:

> Every LRV shall be equipped with a safety device that requires the operator's continuous pressure or activity to remain activated. The

> safety device shall be interconnected with the propulsion and service braking system in such a manner that should the device fail to detect an appropriate level of activity or pressure exerted by the operator, propulsion power will be interrupted, brakes will be automatically applied in a non-retrievable manner, and the train will be brought to a stop.

Deadman control devices typically have a spring loaded device, in SCVTA's case a T-handle, that must be rotated for the vehicle to operate. It requires constant pressure. If the handle is released the vehicle comes to a stop.

The request for deviation addresses the word "non-retrievable." SCVTA intends to equip their new low floor LRVs with retrievable, rather than non-retrievable deadman controls as required by Section 4.12 of General Order 143-B. In the retrievable mode, the operator can regain control of the LRV in the event of inadvertently releasing the T-handle of the spring-loaded deadman controller before the LRV comes to a complete stop. This is done by rotating the master controller handle 90 degrees thus reactivating the controls and resuming normal operation.

In the non-retrievable mode, however, the mere release of the master controller handle from the normal operating position (rotating the master controller handle 90 degrees while continually holding it in this position) will result in propulsion being removed and full-service braking being applied. This brake application will be maintained until the LRV has completely stopped even if the operator tries to regain control of the LRV by placing the controller's handle in its normal operating position described above.

SCVTA currently operates its fleet with deadman controls utilizing the retrievable capability as was authorized by Commission's Resolution ST-8 dated April 22, 1992.

To date, SCVTA has not experienced any accidents or incidents associated with the use of the deadman control having this retrievable capability.

Discussion

To remain consistent with the operating characteristics of current LRVs, SCVTA is requesting the authority to deviate from Section 4.12 of General Order 143-B. This request is to be applied to the newly purchased low floor LRVs from Kinkisharyo of Japan. The first two vehicles have been delivered and are undergoing system testing at this time.

SCVTA requested and was granted authority to deviate from the same non-retrievable deadman control requirement through Commission's Resolution ST-8 of April 22, 1992. The operation of the deadman and its master controller in this resolution are identical to those described in Resolution ST-8.

The retrievable option of the deadman control requested will not compromise safety. The intent of the Section 4.12 of General Order 143-B will also be met since in the event an operator becoming incapacitated the train will be brought to a complete and mandatory stop by the proposed deadman controller. This is achieved because the action of placing the proposed deadman controller in a position that allows train movement (rotating the controller's handle 90 degrees and holding it in this position) requires a deliberate and controlled action that cannot be performed by an incapacitated operator. Having the retrievable option, however, will provide SCVTA the flexibility with which inadvertently initiated deadman stops can be avoided. This option will also enhance safety by providing operators increased control to be able to clear their trains away from intersections in the event of inadvertently initiated deadman braking.

Comments

This is an uncontested matter in which the resolution grants the relief requested. Accordingly, pursuant to Public Utilities Code Section 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

Findings

1. By letter dated June 26, 2001, SCVTA requested authority to deviate from the requirements of General Order 143-B, Section 4.12 Deadman Control.

2. Prior to placing their current LRVs in revenue service, SCVTA was granted identical authority to deviate from the aforementioned requirements through Commission's Resolution ST-8 dated April 22, 1992.

3. To date, SCVTA has not experienced any accidents or incidents as a result of the authorized deviation of Resolution ST-8.

4. This request for deviation is to be applied to the newly purchased low floor vehicles from Kinkisharyo of Japan having identical deadman controllers to those in current operation. The design of these controllers meets the safety intent of General Order 143-B and enhances the flexibility of train operations.

Therefore, IT IS ORDERED that:

The Santa Clara Valley Transportation Authority (SCVTA) is granted authority to deviate from the "non-retrievable" requirement of General Order 143-B, Section 4.12 so that the deadman control for the newly purchased 900 Class Low Floor Kinkisharyo vehicles may function identically to the deadman device on the current light rail vehicles.

This resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed, and adopted by the Commission at its regularly scheduled meeting on November 29, 2001. The following Commissioners voted favorably thereon:

WESLEY M. FRANKLIN
Executive Director